| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/054,577 | 11/13/2001 | William C. Moyer | SC11370TH | 7727 |

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| 23125 | 7590 | 04/19/2006 |

FREESCALE SEMICONDUCTOR, INC.
LAW DEPARTMENT
7700 WEST PARMER LANE MD:TX32/PL02
AUSTIN, TX 78729

| EXAMINER |
|---|
| MEONSKE, TONIA L |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2181 | |

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | Application No. | Applicant(s) |
| | | 10/054,577 | MOYER, WILLIAM C. |
| *Office Action Summary* | | Examiner | Art Unit |
| | | Tonia L. Meonske | 2181 |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on <u>20 December 2005</u>.

2a)☒ This action is **FINAL.**     2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) <u>1-7,9,10 and 13-20</u> is/are pending in the application.

    4a) Of the above claim(s) <u>6 and 7</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-5,9,10 and 18-20</u> is/are rejected.

7)☒ Claim(s) <u>13-17</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

FRITZ FLEMING
Supervisory PRIMARY EXAMINER 4/17/2006
GROUP 2100
AU 481

**Attachment(s)**

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

## DETAILED ACTION

### *Election/Restrictions*

*1.*     Applicant's election without traverse of claims 1-5, 9, 10, and 13-20 in the reply filed on

July 12, 2005 is acknowledged.

### *Claim Rejections - 35 USC § 102*

2.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3.·     The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

(AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002

do not apply when the reference is a U.S. patent resulting directly or indirectly from an

international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA

35 U.S.C. 102(e)).

4.     Claims 1-5, 9, 10, and 18-20 rejected under 35 U.S.C. 102(e) as being anticipated by

Karguth, US Patent 6,223,277 (herein referred to as Karguth).

5.     Referring to claim 1, Karguth has taught a method for a processor, having a register file

comprising a plurality of registers (Figure 3, elements 24 and 42) and a broadcast specifier

corresponding to the register file (column 11, line 52-column 13, line 60, bits 15:0 of instruction

code), to selectively broadcast via a coprocessor communication bus (column 11, line 52-column

13, line 60, COPA and COPD), write transactions to said register file (column 11, line 52-

column 13, line 60, load and store operations), the method comprising:

    a.      receiving an operand to be written to said register file (column 12, lines 35-42,

element 41);

    b.      selecting one of said plurality of registers in said register file (column12, lines 16-

19, lines 22-26, and lines 30-37, a register is selected in elements 24 and 42);

    c.      providing to said register file said operand to be written to said register file

(column 12, lines 34-37 and lines 61-65, column 13, lines 2-5, COPD provides the

operand); and

    d.      selectively providing via said coprocessor communication bus said operand to be

written in said register file based on the broadcast specifier, wherein said operand is

provided to said coprocessor communication bus when the broadcast specifier indicates

that broadcasting is enabled and said operand is not provided to said coprocessor

communication bus when the broadcast specifier indicates that broadcasting is not

enabled (column 11, line 52-column 13, line 59, Data is selectively provided to COPD

based on bits 15:0 of instruction code. Data is provided when bits 15:0 enable the data

for broadcasting.).

6.      Referring to claim 2, Karguth has taught he method of claim 1, as described above, and

wherein the broadcast specifier comprises a set of broadcast indicators, each broadcast indicator

within the set of broadcast indicators corresponding to one of the plurality of registers (column

12, lines 18-22, Bits 15:8 specify a specific register.).

7.      Referring to claim 3, Karguth has taught the method of claim 2, as described above, and wherein selectively providing via said coprocessor communication bus said operand to be written in said register file is based on the broadcast indicator corresponding to the selected one of said plurality of registers in said register file (column 12, lines 18-30, Bits 15:0 is the broadcast indicator).

8.      Referring to claim 4, Karguth has taught the method of claim 1, as described above, and wherein the broadcast specifier is one of a plurality of broadcast specifiers within the processor, each of the plurality of broadcast specifiers corresponding to at least one broadcast region of the processor (column 12, lines 18-30, bits 15:0, A particular portion of a particular register.).

9.      Referring to claim 5, Karguth has taught the method of claim 4, as described above, and further comprising:

    a.      selectively providing, via said coprocessor communication bus, a region indicator corresponding to a current broadcast region of a current write transaction (Figure 3, column 12, lines 18-30, The region indicator is provided on COPA.).

10.     Referring to claim 9, Karguth has taught a method for a processor, having a register file comprising a plurality of registers (Figure 3, elements 24 and 42), to selectively broadcast via a coprocessor communication bus, write transactions to said register file, the method comprising:

    a.      receiving an operand to be written to said register file (column 12, lines 35-42, element 41);

    b.      selecting one of said plurality of registers in said register file (column12, lines 16-19, lines 22-26, and lines 30-37, a register is selected in elements 24 and 42);

c.      providing to said register file said operand to be written to said register file
(column 12, lines 34-37 and lines 61-65, column 13, lines 2-5, COPD provides the
operand); and

d.      selectively providing via said coprocessor communication bus said operand to be
written in said register file (column 11, line 52-column 13, line 59, Data is selectively
provided to COPD based on bits 15:0 of instruction code.) based on a current execution
region of said processor (Bits 15:8 of instruction code is the current execution region.),
wherein selectively providing comprises:

    i.      determining whether broadcast is enabled for the current execution region
(column 11, line 52-column 13, line 59, Bits 7:0 determine the portion of the
current execution region which is enabled for broadcasting.), and

    ii.      if broadcast is enabled for the current execution region, providing said
operand via said coprocessor communication bus, and if broadcast is not enabled
for the current execution region, not providing said operand via said coprocessor
communication bus (column 11, line 52-column 13, line 59, Data is selectively
provided to COPD based on bits 15:0 of instruction code. Data is provided when
bits 15:0 enable the data for broadcasting.).

11.     Referring to claim 10, Karguth has taught a processor, comprising:

a.      a plurality of registers (Figure 3, elements 24 and 42);

b.      circuitry for performing a write operation to one of the plurality of registers
(Figure 3, column 11, line 52-column 13, line 59);

c.      conductors for providing an operand for the write operation to said one of the

plurality of registers (Figure 3, column 11, line 52-column 13, line 59, elements 40 and

41 are among the conductors for providing operands);

d.      a set of broadcast specifiers (column 11, line 52-column 13, line 59, Bits 15:0 of

the instruction code.), each broadcast specifier within the set of broadcast specifiers

comprising a set of broadcast indicators wherein each broadcast indicator corresponds to

a register of the plurality of registers (column 11, line 52-column 13, line 59, Bits 15:8 of

the instruction code.) and indicates whether or not a write to the corresponding register is

to be broadcasted (column 11, line 52-column 13, line 59, Bits 15:8 of the instruction

code. Bits 7:0 indicate which bits within the register should be broadcasted and written

into the register file.),

e.      compare circuitry (Figure 3, element 25) for comparing the one of the plurality of

registers and a corresponding broadcast indicator within a selected one of the broadcast

specifiers and for providing a broadcast enable signal (COPA is the broadcast enable

signal.), wherein the broadcast enable signal enables broadcasting when the

corresponding broadcast indicator indicates broadcasting for the one of the plurality of

registers and the broadcast signal does not enable broadcasting when the corresponding

broadcast indicator does not indicate broadcasting for the one of the plurality of registers

(column 11, line 52-column 13, line 59, Figure 3, Data is provided to COPD based on

COPA, bits 15:0. Data is provided when bits 15:0 enable the data for broadcasting.); and

f.      a port, coupled to the compare circuitry, for communicating with a coprocessor

communication bus (Figure 3, element 41), said port comprising at least one coprocessor

communication bus signal for providing said operand when said broadcast enable signal

enables broadcasting and not providing said operand when said broadcast enable signal

does not enable broadcasting (column 11, line 52-column 13, line 59, COPD provides

said operand which is enabled by COPA.).

12.    Referring to claim 18, Karguth has taught a processor, comprising:

a.        a plurality of registers (Figure 3, elements 24 and 42);

b.        circuitry for performing a write operation to one of the plurality of registers

(Figure 3);

c.        conductors for providing an operand for the write operation to said one of the

plurality of registers (Figure 3, column 11, line 52-column 13, line 59, elements 40 and

41 are among the conductors for providing operands);

d.        a program counter unit, for indicating address locations (Figure 3, element 41

indicates addresses in bits 15:0),

e.        an execution region control unit, coupled to the program counter unit, for

indicating when the indicated address location from the program counter unit falls within

one of a set of execution regions (Figure 3, column 11, line 52-column 13, line 59, Bits

15:8 in the instruction code indicate a register with multiple bytes.), each execution

region indicating a range of instruction addresses (Figure 3, column 11, line 52-column

13, Bits 15:8 indicate an address range of regions within a register.), and

f.        a port, coupled to the execution region control unit, for communicating with a

coprocessor communication bus (Figure 3, element 41 and COPA and COPD), said port

comprising at least one coprocessor communication bus signal (COPA) indicating a

current execution region from the set of execution regions when the indicated address

location falls within one of the set of execution regions (Figure 3, column 11, line 52-

column 13, Bits 7:0 indicate the current execution region from the set indicated in Bits

10:8).

13.    Referring to claim 19, Karguth has taught the processor of claim 18, as described above,

and wherein said port further comprises:

a.      at least one coprocessor communication bus signal for selectively providing said

operand to be written to said one of the plurality of registers during said write operation

based on the current execution region (Figure 3, column 11, line 52-column 13, COPD).

14.    Referring to claim 20, Karguth has taught the processor of claim 18, as described above,

and wherein the execution region control unit comprises a plurality of region storage devices,

wherein in each execution region within the set of execution regions has a corresponding region

storage device for defining the execution region (Figure 3, elements 24 and 42, column 11, line

52-column 13).

### Response to Arguments

15.    Applicant's arguments filed in the Pre-Appeal Brief on December 20, 2005, with respect

to claims 1-5, 9, 10, and 18-20, have been considered but are moot in view of the new ground(s)

of rejection.

### Allowable Subject Matter

16.    Claims 13-17 are objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base claim

and any intervening claims.

### *Conclusion*

17.    Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

18.    A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

19.    Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Tonia L. Meonske whose telephone number is (571) 272-4170.

The examiner can normally be reached on Monday-Friday, with every other Friday off.

20.    If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

21.     Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system.  Status information for published applications

may be obtained from either Private PAIR or Public PAIR.  Status information for unpublished

applications is available through Private PAIR only.  For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


tlm

FRITZ FLEMING
Supervisory PRIMARY EXAMINER  4/17/2006
GROUP 2100
AU 2181